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APPROVAL OF UNDP ASSISTANCE TO A PROJECT OF
CHINA
IPF:(1987-91) $176 600 000
(CPR/92/G32) - Development of Coalbed Methane Resources in China

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Date of approval by the AC:[1]	29 April 1992
Expected duration:	Three years
Proposed executing agency.	United Nations
Government implementing agency:	The Ministry of Energy
Proposed UNDP contribution:	$ 10 000 000 Source of funds: GEF
Third-party cost sharing:	(to be determined)
Total UNDP budget:	$ 10 000 000

Project background

With an annual production of 1.14 billion tons, China is the world's largest coal producer and also the largest emitter of coalbed methane, a potent greenhouse gas (20-60 times more potent than carbon dioxide). Increases in methane concentrations have been highly correlated with increases in population and human activity. Stabilizing emissions will require reductions of about 15-20 percent of those. These are much lower than those required for other greenhouse gases and can be achieved profitably or at low cost because methane is a useful energy source.

Coal production accounts for about 10 percent of total human-related methan emissions. Out of 600 state managed mines, 290 are regarded as gassy mines and 165 even are threatened with gas outburst. For mining safety, almost all large mines are equipped with ventilation systems to drain methane into the atmosphere. Only a few of the mines can recover methane and only 30% of gas is used. China is targeting to increase its annual output of coal to 1.23 billion tons by 1995 and 1.4 billion tons by 2000 to meet the need of economic development. This implies that even more methane will be emitted if China fails to develop a proper strategy and employ new technology. Combined with a shortage of natural gas (the cleanest fossil fuel) this will have serious local and global environmental impacts. Bottlenecks to change, to date, include lack of supportive policies, lack of capital, price disincentives, and lack of technical know-how and equipment. Both internal reform and outside technical assistance are required to realize the potential for coalbed methane utilization.

In order to improve this situation, the Government of China plans to initiate a strategy including assessment of methane resource, formulation of a national plan for developing the methane, and introduction and diffusion of appropriate technologies required. Demonstration of the technical and financial possibilities and their applicability to China (and to other developing economies) is considered a key requirement to achieve the overall strategy.

Description of project

The project aims to contribute to the Chinese national programme for reduction of coalbed methane emissions through technical and institutional preparation for the formulation of the national strategy to develop the methane industry by introduction and demonstration of a variety of technologies and techniques and by sensitization of policy makers at both the central and local levels about environmental and economic significance of rational recovery and use of methane resources. Benefits at the end of the project are expected to include improved air quality, improved safety standards for miners and a new, clean-burning energy source. The immediate objectives of the project are to: (a) develop a comprehensive methane recovery and utilization programme for Songzao mine in Sichuan province that can be funded by an international development agency; (b) facilitate the production of coalbed methane using vertical well drilling technologies in advance of mining at Kailuan mine in order to mitigate the emissions of methane to the atmosphere; (c) facilitate the development of an integrated gas drainage system by using in-seam, horizontal drainholes in advance of mining and vertical wells drilled from the surface to reduce the emission of methane; (d) assess the potential for methane development in China and construct a database to serve as a basis

[1] This Fact Sheet reflects the status of the project/revision at the time it was approved by the Action Committee; modifications to the project/revision may have occurred subsequently.

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for development of a programme to mitigate the emission of methane; and (e) sensitize policy makers in central and local governments of environmental and economic significance of coalbed methane and strengthen capacity of managers and engineers in resource evaluation, recovery and utilization.

The strategies to be employed will include: (a) upgrading the technical and managerial levels of groups with supervisory functions; (b) improving operational practices in the field, principally at the mining corporation level; and (c) increasing the interest in and support for coalbed methane as a natural gas source. These will be achieved through: (1) provision of external expertise at each level combined with extensive training, conferences to review and disseminate results; (2) introduction of appropriate new techniques and equipment in actual working mine situations and analysis of results; and (3) preparation of financial, economic and technical feasibility studies. This work will lead to production of plans for commercial development, and a comprehensive methane recovery and utilization programme. Assessments of individual components of the programme are integrated into the work plans. In addition, formal reviews, evaluations and assessments of the overall programme are planned on an annual basis with major evaluations after 24 months and at the end of activities. Overall coordination will be achieved through a Project Steering Committee.

Inputs

UNDP will provide 177 work-months of international consultant services, among which 127 work-months will be under subcontracts, the rest on an individual basis; seven study tours; 57 work-months of overseas training in six different technical fields; necessary equipment and vehicles to be purchased either under the subcontracts or directly by the executing agency; and miscellaneous costs.

Financial data

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Personnel	1 477 000
Subcontract	5 298 000
Training	773 000
Equipment	1 625 000
Agency support cost	600 000
Miscellaneous	27 000
Contingency	200 000
Total	10 000 000

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